Missouri Department of Natural Resources
Data Processing Standard

Topic: Minimum Computer Configurations	This Standard was reviewed and approved
Item: A	
Status: Version 1.5	by:_____
Updated: November 18, 2002	Jeff Staake, Deputy Director Missouri Dept. of Natural Resources
See also: Data Processing Standard B: Software Standards	on: signed paper kept on file

Introduction:

All new systems ordered must meet all of the minimums presented in this standard. Please ensure you are using the latest copy of this standard, since it will be updated/amended periodically as newer technologies become mainstream and cost effective. Current copies may always be obtained from the departmental network or web site.

The department is moving toward a client/server environment for new applications. Client/server is an excellent platform for designing the applications staff want, but there are certain minimum hardware requirements needed to use these applications. While MIS will strive to build applications that can function on existing computers, many applications will require a high-end computer system in order to operate effectively.

Computer technology is rapidly changing. New hardware and software products are released constantly, making it difficult to know what to purchase. Since computer technology can be a significant investment, it is important to buy something that not only meets current needs, but is flexible enough to have a useful life of three to five years. Still, limited funding requires that these and other factors be balanced against cost considerations.

When the standard is updated as described above, MIS and the Data Processing Coordinators will agree upon the best balance at the time between performance/functionality and price. The standard will not be changed to increase the typical cost of the minimum configuration beyond what the minimum configuration cost when the standard was first implemented. Therefore, the cost of a minimum desktop system will not exceed $3,324, which is what a Pentium Pro 200 desktop cost in April 1997. Similarly, the cost of a minimum portable system will not exceed $3,472, which is what a Pentium 120 portable cost in April 1997. Because prices will fluctuate throughout each product's life-cycle, and are also heavily influenced by changes in supply and demand, we may at times be able to buy standard systems for less.

MIS believes the computer equipment and software recommended herein will be viable for three to five years despite the constant advances occurring within the computer industry. However, this constant progress is also the reason it is unlikely that any computer equipment or software purchased today will be viable after five years. MIS does and will continue to do everything possible to make recommendations that result in smooth transitions to new hardware and software. Regardless, we are all faced with constantly emerging requirements and a computer

industry that evolves so rapidly that no one can be fully prepared for the constant onslaught of change.

There is a supplmental document that also explains the rationale behind the minimum configuration which is updated occasionally. Also, note that basic software is only addressed herein because most vendors "bundle" such software with their computers. Needed software may just as easily be purchased separately, although that may cost more. Refer to Data Processing Standard B for more information on software standards.

This standard rescinds all previous standards issued regarding this topic.

Requests for exceptions to this standard:

All orders for computers that do not meet the minimum computer configurations must be accompanied by a technical justification for such a purchase, and be routed first to the appropriate DP Coordinator, second to MIS for a recommendation, and finally to the department's Executive Staff for approval. Simple cost considerations will normally not be sufficient justification.

Purchasing a desktop or portable computer:

The first decision that must be made when purchasing a computer is whether to choose a desktop (non-portable), all-in-one (non-portable), or notebook (portable) computer. Some customers may have a tendency to opt for a portable without realizing the ramifications and costs associated with that choice. Portable computers are by definition a compromise between portability and capability. At present, a typical portable computer operates substantially slower than a typical desktop computer, yet can cost several hundred dollars more depending upon the market. Clearly, performance and economy are sacrificed for portability. The cost increases further if a full-sized monitor, keyboard, mouse, and docking station are purchased for in-office use. In addition, portable computers cannot be upgraded or repaired as easily as desktop computers, and therefore tend to have a shorter useful life. However, the goal here is not to completely discourage the purchase of portable computers; Rather, the goal is to stress that portable computers should only be purchased when portability is a necessity, and that all the factors be weighed carefully before a decision is made. For many, the best solution may be a desktop or all-in-one system, using a "floater" portable within their unit occasionally as needed.

Purchasing a flat-panel or traditional CRT display:

Flat-panel displays are now the standard for all systems. Flat-panels have advantages of lower power use and heat generation, smaller "footprint" on the desktop, are easier to move, and can be easier on the eyes. The primary disadvantage remains higher price, especially for displays of 17 inches or more. Exceptions to the standard can be requested as appropriate when a traditional CRT display is needed to meet a specific business requirement.

Recommended vendor(s):

Gateway and Dell are the vendors with whose new equipment data processing support staff are most familiar. This familiarity can result in faster, more efficient support. Both vendors offer quality products and support. Since prices and features regularly fluctuate, either vendor may offer the better deal at a given time, depending upon the exact configuration you're seeking.

Servers:

This document does not address specific line-item standards for servers. However, all server purchases are reviewed by MIS and hardware specifications are evaluated based upon the server's planned role. Compaq is our primary vendor for all new servers.

The configuration details for standard desktop and portable systems begin on the next page.

Minimum configuration for a (non-portable) desktop or all-in-one computer:

1. 2.4 Ghz Intel Pentium 4 computer;
2. 256MB of RAM (RDRAM is recommended for better performance);
3. 20.0GB EIDE hard drive, 7200 RPM, supports Ultra ATA transfers;
4. 15" color flat-panel display;
5. 32MB AGP graphics accelerator;
6. Microsoft Windows 2000 Professional;
7. Microsoft Office 97 Professional software suite;
8. 100Mbps PCI Ethernet card (or often integrated into the motherboard);
9. 10X CD-ROM drive;
10. Sound card and speakers;
11. Uninterruptable Power Supply [UPS] to protect PC (Recommended but Optional);
12. CD Recorder / reWritable drive (Optional);
13. V.92 56Kbps or faster MODEM (Optional);
14. Optical Microsoft (or compatible) Mouse;
15. Full tower or desktop case (Optional);
16. Three year mail-in warranty on all parts.

Minimum configuration for a portable computer:

1. 1.7 Ghz Pentium 4 [mobile] computer;
2. 256MB of RAM;
3. 20.0GB EIDE hard drive, supports Ultra ATA transfers;
4. 14" XGA-resolution active matrix color display;
5. 32MB AGP graphics accelerator;
6. Microsoft Windows 2000 Professional;
7. Microsoft Office 97 Professional software suite;
8. 100Mpbs PCI Ethernet PC-Card (or often integrated into the system board);
9. 10X CD-ROM drive;
10. Integrated sound and speakers;
11. V.92 56Kbps or faster PC-Card MODEM (Recommended but optional);
12. CD Recorder / reWritable drive (Optional);
13. Surge Suppressor to protect battery charger (Recommended but optional)
    (UPS recommended when docking with externally powered peripherals)
14. External monitor (Optional for in-office use);
15. External keyboard (Optional for in-office use);
16. External optical mouse (Optional for in-office use);
17. Docking bar or docking station (Optional for in-office use);
18. Three year parts and labor mail-in warranty for complete system.